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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
PRYOR, ALTON NATHANIEL	
ART UNIT	PAPER NUMBER
1616	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/849,509	MUDGE, LAURENCE C.	
	Examiner	Art Unit	
	ALTON N. PRYOR	1616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 April 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8,10-17,20-35,37 and 38* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8, 10-17, 20-35, 37 and 38* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Applicant's arguments filed 4/24/09 have been fully considered but they are not persuasive. See argument below.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-8, 10-17, 20-35, 37 and 38 are obviousness over **Lucas 5,336,661 (8/94: filed 10/91), printout of** http://www2.siri.org/msds/f2/bzz/bzzsc.html, for ingredients in Rohm and Haas Co.'s FORE.TM. FUNGICIDE, 62440 (7/24/1991) and **Collins 5,206,228 (4/93).**

Lucas teaches (see examples 1-8) using on turfgrass fungicidal treatment formulations comprising:

a.1 part by weigh of certain monoester salts of phosphorous acid, for example fosetyl-Al (preferably Aliette.TM.) and

b.1.5 to 2.5 parts by weigh of mancozeb (preferably FORE.TM.).

The FORE.TM. brand of mancozeb contains 70% mancozeb and 1-2% of copper phthalocyanato(2-) which is a phthalocyanine compound also known. as Pigment Blue 15. See http://www2.siri.org/msds/f2/bzz/bzzsc.html, for ingredients in Rohm and Haas Co.'s FORE.TM. FUNGICIDE, 62440.

Accordingly, Lucas teaches turfgrass formulations comprising:

a.1 part of certain monoester salts of phosphorous acid, for example fosetyl-Al (preferably Aliette.TM.) and

b.1.5 to 2.5 parts of mancozeb (preferably FORE.TM.) and

c. < 1 part by weight of Pigment Blue 15 as the phthalocyanine compound.

The Lucas ALIETTE and FORE formulations comprising the above ingredients realized significant improvements in turf color as compared to other Mancozeb containing formulations lacking Pigment Blue 15. See col. 5-6. Lucas further teaches the use of its compositions as "wettable powders" (as in instant claim 21 and 38) and "aqueous suspensions" (as in instant claims 20 and 37). See Lucas col. 3.

The Lucas reference composition and method differs from the instant claims insofar that it fails to teach:

a. the substitution of the anti-fungal agent mancozeb with a different antifungal agent such as phosphorous acid or alkali/alkaline earth metal salt thereof (for all the instant claims) In this regard, it is noted that mancozeb is an ethylenebisdithiocarbamate fungicide excluded from the instant claims;.

b. the substitution of Pigment Blue 15 with a different phthalocyanine compound (only instant claims 4, 17, 27 and 35).

Collins teach the anti-fungal use of BOTH monester salts of phosphorous acid AND phosphorous acid or alkali/alkaline earth metal salt thereof for the added benefit of controlling arthropod pests when applied to plants including turf. See Abstract; patent claims 1-18, including claim 9 drawn to turf; and col. 10. Collins additionally teaches, interchangeably, the further incorporation of various colorants into its plant treatment formulations including metal phthalocyanine dyestuffs. See col. 12, especially lines 10-22.

Accordingly, one of ordinary skill in the art at the time of applicant's invention would have been motivated to modify the Lucas reference turf treating composition containing mancozeb to substitute the Collins reference phosphorous acid or alkali/alkaline earth metal salt since they both possess analogous anti-fungal activities with the added benefit of increase pesticide resistance found in the Collins phosphorous acid or alkali/alkaline earth metal salt fungicide.

Additionally, Collins provides motivation to one of ordinary skill in the art to substitute one functionally equivalent phthalocyanine compound for another i.e. substitute the use of Pigment Blue 15 with a different phthalocyanine dye compound.

Thus, it would have been prima facie obvious to one of ordinary skill in the art at the time of filing of the instant claimed invention to substitute the Luca mancozeb fungicide with the Collins phosphorous acid or alkali/alkaline earth metal salt thereof fungicide for added pesticide resistance as taught by Collins and where necessary substitute a different phthalocyanine dye for Pigment Blue 15 in the Lucas composition to attain analogous colorant properties as taught by Collins.

Response to Applicants' Arguments

The Applicants provide an overview of the prior Lucas patents (Lucas '661, '672, '852 and '804 to Mudge) cited in the Examiner's office actions. However, only the Lucas '661 patent is specifically cited in the rejection of the present office action. The Lucas '661 patent will be addressed in the Examiner's response to the Applicants' arguments. Previous rejections involving the other Lucas and Mudge patents have been withdrawn

and therefore the other patents will not be addressed in this office action. The Examiner appreciates the overview provided by the Applicants.

Applicants argue:

a) Instant claims require the phosphorous acid component plus phthalocyanine compound to be present in a synergistically effective amount to achieve a fungicidal composition enhancing turf grass quality. The synergistic property is expressed in the instant claims and therefore claims cover a composition and method that yields a turf grass quality and fungus control that would be unobvious to an artisan in the field from a mixture of phthalocyanine dye colorant and fungicidal phosphorous acid component. The Examiner argues that the Examples in the instant specification requires mancozeb. The claims are not commensurate in scope with the Examples yielding unexpected results.

b) The reasoning behind the rejection (Lucas plus Collins) is flawed since 1) it overlooks the criticality of the synergistic combination of mancozeb and fosetyl-Al disclosed in the Lucas '661 patent, 2) ignores the main commercial product "Aliette" which does not contain such a pigment, and 3) it relies on a disclosure attributed to be in the prior art '661 patent but is not present in any prior art. The Examiner argues that Collins at column 1 lines 20-30 discloses conventional knowledge of using phosphorous acid and salts thereof and its monoesters as actives against plant fungal disease. The further disclosure of its pesticidal effects is a teaching or suggestion toward substituting the instantly disclaimed mancozeb for another fungicide such as a phosphorous compound. Applicants' synergistic argument about teaching away of removing

synergistic antifungal phosphorous monoesters and bisthiocarbamates such as mancozeb combination is not convincing since obviousness can be attained for a less preferred embodiment. According the Collins, there is an added motivation toward substituting mancozeb with a fungicide that will keep away pest (abstract).

Rohm and Haas Bulletin employed in the rejection is used to define that FORE contains mancozeb plus pigment blue and that ALIETTE contains fosetyl-Al. The Rohn and Haas reference clearly establishes the chemical content of the invention disclosed in Lucas' '661.

Applicants argue that it would not be obvious to combine Lucas '661 and Collins '228 since Lucas is to controlling fungi and Collins is to controlling pests such as arthropods. The Examiner argues that Collins' invention like Lucas' invention also possess fungicidal activity (Collins' column 1 lines 20-26). For this reason it is obvious to combine Lucas and Collins.

In addition, Collins alone teaches a composition comprising instant phosphorous components (abstract). Collins also teaches that the composition can contain dyes such as Pigment blue (column 12 lines 10-22). Such teaching yields a composition comprising instant phosphorous compounds plus pigment blue. Collins also teaches that the composition possess plant fungicidal activity (column 1 lines 20-26). Collins teaches a method of applying the composition to plant foliage (column 4 line 10 – column 7 line 7). Such application method would result in the control of plant fungal disease.

Claims 1-8,10-17,20-35,37,38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gullino et al. (Chemical control of dollar spot and brown patch of turfgrass in Italy, Mededelingen - Faculteit Landbouwkundige en Toegepaste Biologische Wetenschappen, Universiteit Gent, 1995, 60, 2b Proceedings, 47th International Symposium on Crop Protection, pt. 2, 1995, 367-70), Fenn et al (Phytopathology, 74 (5), pp. 606-611), Kato et al. (JP 02138376; 5/28/06) and Nagashima et al. (JP 03221576; 9/30/91).

Applicant's claims are drawn to a synergistic fungicidal composition comprising a monoester salt of a phosphorous acid or phosphorous acid or alkai or alkali earth metal salt thereof plus a phthalocyanine compound such as Pigment Blue 15. Applicant's claims are also drawn to a method of applying said composition to turfgrass to combat fungi growth and enhance turfgrass quality.

Gullino et al. teach that the fungus Rhizotonia solani causes brown patches in turfgrass, such as, bentgrass and bermudagrass (page 367 summary section and pp. 368-9 result section). Gullino et al. do not teach that the phosphorous compounds in claims 1,10-14,22-25,31 and 32 are used to combat Rhizotonia solani in turfgrass. However, Fenn et al. teach that phosphorous acid and fosetyl-Al are fungicides used to control Rhizotonia solani (pages 609-610 discussion section). It would have been obvious to apply phosphorous acid or fosetyl-Al to the turfgrass recited in claims 1,6,7,29,30 to kill Rhizotonia solani. Neither Gullino et al. nor Fenn et al. teach the use of a phthalocyanine compound such as pigment blue 15 listed in claims 2-5,8,10,15-17,22-28,31-35. However, Kato et al. teach that green dye can be applied to brown

dead lawn areas in golf courses (turfgrass) to restore the desired green appearance to golf courses (page 2). Nagashima et al. teach that a pigment blue 15 colorant can be added to dead grass to restore the color of grass (pages 8-9). It would have been obvious to one having ordinary skill in the art to add pigment blue 15 to phosphorous acid or fosetyl-Al. One would have been motivated to do this because while phosphorous acid or fosetyl-Al would control/kill the fungus, Rhizotonia solani, responsible for causing brown or dead spots in the turfgrass (golf course), the pigment blue 15 would restore the desired green appearance to turfgrass.

The combination of references excludes an ethylenebisdithiocarbamate contact fungicide recited in claims 1,10,24 and 32 which is a requirement of the present claims. With respect to the instant amount of phthalocyanine and fosetyl-Al or phosphorous acid, one having ordinary skill in the art would have been able to determine the optimum amount of phthalocyanine and fosetyl-Al or phosphorous acid. One would have been motivated to do this in order to make a composition that would have been most effective in controlling fungal growth and restoring color without destroying the turfgrass. With respect to the physical form of the composition recited in claims 20,21,37 and 38, one would have expected all physical forms of the actives to be effective absent a showing of unexpected results. With respect to the term "synergistic" used in the claims to describe the combined activity of said phthalocyanine and fosetyl-Al or phosphorous compound, the Examiner would like to point out that all of the examples in the specification and declarations showing synergism include mancozeb. The Examiner further points out that Applicant does not provide examples showing synergism for a

combination comprising only phosphorous acid or fosetyl-Al plus a phthalocyanine lacking the fungicide (mancozeb). The claims are not commensurate in scope with the examples provided in the declarations.

Response to Applicants' Argument

Applicants argue that Kato and Nagashima are not combinable with Guillino and Fenn. Kato and Nagashima are to coloring brown or dead grass with a pigment plus resin binder to improve grass color ,whereas Guillino and Fenn are to controlling fungal disease in the grass by making use of a fungicide. The Examiner maintains that it would have been obvious to combine the inventions, because one would have desired that the grass possess a beautiful green appearance by applying thereto Kato's and Nagashima's phthalocyanine containing compositions while the fungicides of Guillino and Fenn are being applied simultaneously to the dead grass to control the fungal disease. The Examiner argues that the combination of references do not disclose that the dye and phosphorous compound yield synergism. The Examiner argues that instant specification shows only synergistic results for compositions comprising mancozeb plus instant phosphorous compounds plus instant phthalocyanine compounds. Applicants provide no evidence that the resin binder of Kato and Nagashima would prevent the growth of the grass by inhibiting photosynthesis.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Telephonic Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alton N. Pryor whose telephone number is 571-272-0621. The examiner can normally be reached on 8:00 a.m. - 4:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Alton N. Pryor/
Primary Examiner, Art Unit 1616